



# **PCT**

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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o the following items:	
nion with regard to novelty.	, inventive step and industrial applicability
n	are an are an are
	to novelty, inventive step or industrial applicabilit
rnational application	
he international application	
	completion of this report
)	06 May 2005 (06.05.2005)
	r Article 35(2) with regard to supporting such statement ernational application the international application.  Date of

Form PCT/IPEA/409 (cover sheet) (July 1998)



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

Internal application No.

PCT/EP2003/014286

I. Basis	s of the re	port
1. With	n regard to	the elements of the international application:*
$\boxtimes$	the inte	rnational application as originally filed
$\boxtimes$	the desc	cription:
	pages	1-35 , as originally filed
	pages	, filed with the demand
	pages	, filed with the letter of
$\boxtimes$	the clai	ms:
	pages	1-10 , as originally filed
	pages	, as amended (together with any statement under Article 19
	pages	, filed with the demand
	pages	, filed with the letter of
	the drav	wings:
	pages	, as originally filed
	pages	, filed with the demand
	pages	, filed with the letter of
	the seque	ence listing part of the description:
	pages	, as originally filed
	pages	, filed with the demand
	pages	, filed with the letter of
the The	the lar the lar the lar or 55  thregard eliminary contai filed t furnis furnis The s been	to the language, all the elements marked above were available or furnished to this Authority in the language in which mal application was filed, unless otherwise indicated under this item.  this were available or furnished to this Authority in the following language
5. [	beyon	the claims, Nos the drawings, sheets/fig eport has been established as if (some of) the amendments had not been made, since they have been considered to go d the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**  **A sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to
an	ıd 70.17).	ort as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 ment sheet containing such amendments must be referred to under item 1 and annexed to this report.
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#### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

Intern	application No.
PCT/EP	03/14286

. Reasoned statement under Article 3 citations and explanations supporting		inventive step or industrial appl	icability;
. Statement			
Novelty (N)	Claims	1-10	YES
·	Claims		NO
Inventive step (IS)	Claims	1-10	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

- 2. Citations and explanations
  - 1. Reference is made to the following document:

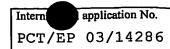
D1: US-A-4 380 604 (Neuhaus et al.), 19 April 1983 (1983-04-19)

- 2. Novelty
- 2.1 None of the documents cited in the search report mention all the important features of the present invention. The subject matter of claims 1 to 10 is therefore novel (PCT Article 33(2)).
- 3. Inventive step
- 3.1 Document D1, which is considered to be the prior art closest to the subject matter of claim 1, discloses the following (the references in parentheses are to D1):

radiation-curable urethane (meth) acrylates produced from alkoxylated polyols esterified with acrylic acid, diisocyanate and hydroxyethyl acrylate (examples 1 and 2).

The urethane acrylates disclosed in D1 are used as

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT



coatings for paper, cardboard, plastics, leather, wood and nonwoven materials, and have good storage stability, elasticity and abrasion resistance (column 2, lines 12 to 22).

The difference between the closest prior art and the subject matter of claims 1 to 10 in terms of technical features is the reduction of the acid value resulting from further esterification with compounds containing epoxide groups in step (k). The examples and comparative example show that the reaction between the acids and epoxy (step (k)) results in improved chemical resistance and greater elasticity.

The problem addressed can therefore be seen as that of producing urethane (meth) acrylates with improved chemical resistance and greater elasticity. The solution proposed in claims 1 to 10 involves an inventive step (PCT Article 33(3)) because it is not obvious to a person skilled in the art that reducing the acid value of the intermediate product with epoxide will result in improved chemical resistance and greater elasticity.